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ABSTRACT

Using data gathered by way of ethnographic research techniques in an intensive collaborative investigation of the classroom practice of two experienced teachers, each teacher's uniqueness is deliniated, and it is illustrated with examples of classroom practice, what it means for each teacher to know what to do in spontaneous practice. Specifically, the question was asked: In the immediacy of the moment in a classroom, how do teachers know when to change or maintain an approach or method of handling a particular situation? The theoretical perspective of this study derives from the notion of the theory-practice dialectic. The conduct of the inquiry was based on the idea of teachers as theorists and on the belief that understanding of teacher practice can be gained through mutual reconstruction of meaning in action. Teaching is viewed as a professional task; teachers as professional practitioners, owners and users of vast resources of experienced knowledge; and teaching practice as an expression of this knowledge. (JD)

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Personal Knowing in Spontaneous Teaching Practice

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Running Head: PERSONAL KNOWING

Abstract

Much of what skilled teachers do in the run of a normal teaching day is immediate and unreflected; spontaneous adaptations to situational complexities. This phenomenon of spontaneous adaptation is an essential and commonplace classroom practice that is an enactment of teacher knowing. Because each teacher's practice is unique each teacher expresses this knowing in a very personal way. Beth and Martin are experienced classroom teachers whose teaching practices reflect their individuality. They, as individuals, have different personal construct systems, different backgrounds and experiences, different philosophies of teaching, and different ambitions and objectives. The way in which Beth responds to her environment is reflective of her personal way of knowing; Martin's actions are likewise traceable to roots in his personal epistemology.

The theoretical perspective of this research derives from the notion of the theory-practice dialectic (McKeon, 1952; Rychlak, 1977, 1981). The conduct of the inquiry was based on the notion of teachers as theorists (Hunt, 1976a, 1980; Hunt & Gow, 1984), and on the belief that understanding of teacher practice can only be gained through mutual reconstruction of meaning in action. Teaching is viewed as a professional task; teachers as professional practitioners, owners and users of vast resources of experienced knowledge; and teaching practice as an expression of this knowledge. The study was conducted with an "inside-out" approach to educational research with the principles of reflexivity, responsiveness, and reciprocality (Hunt, 1987) fundamental in the design, conduct, and interpretation of the work.

Using data gathered by way of ethnographic research techniques in an intensive collaborative investigation of the classroom practices of these two

teachers, I will delineate each teacher's uniqueness and illustrate, with examples of classroom practice, what it means for each to know in spontaneous practice. Each teacher's personally generated metaphor will serve as an interpretive construct.

The insight gained from this exploration and interpretation of the spontaneous teaching practices of Beth and Martin contributes, at the theoretical level, to our understanding of the practical knowledge inherent in spontaneous teaching practice; and at the practical level, to the teachers' own understanding of their work.

Personal Knowing in Spontaneous Teaching Practice[1]

As teachers perceive, interpret, and respond to, both deliberately and intuitively, the exigencies of classroom life their understandings are expressed, shaped, and modified. Teacher knowledge and teacher practice exist in a dialectical relationship (McKeon, 1952; Rychlak, 1977, 1981) evolving and changing through ongoing interaction. Through focused reflection and dialogue organized around teaching practice, teacher understandings can be made explicit and transformed into educational knowledge; a process that stands to inform, at the practical or classroom level, the individual teachers involved in the inquiry process and, at a theoretical or broader level, the fields of study concerned with teachers' practical knowledge.

For teachers, research into their own teaching is an experience in professional renewal; for researchers, it is an opportunity to learn more about what goes on in classrooms. In this study the focus was on the latter. The purpose was to gain insight into the practical knowledge inherent in the professional performance of two experienced classroom practitioners, with a particular emphasis on the spontaneous aspect of teaching practice. The knowledge embedded in teaching practice was the target of our exploration, and the teachers' actions, regardless of their congruence with my values and beliefs, were understood to be expressions of their personal epistemologies.

Although improvement of practice was not an explicit objective the teachers did realize benefits from the mere intensity of the examination of their teaching. The renewed awareness and fresh perspectives they gained in the study

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[1]Paper prepared for presentation at the annual meeting of the American Educational Research Association, New Orleans, April, 1988.

can be considered as entry points for further personal inquiry and ongoing professional renewal, a notion I will develop later in the paper. My main purpose, however, is to address two questions which governed this recent investigation of classroom practice. Both questions concern the spontaneous aspect of teaching practice, and both query teacher knowing in this spontaneous action.

1. In the immediacy of the moment how do teachers know when to change or maintain an approach or method of handling a particular situation?

2. What do teachers mean when they say they just know when something does or doesn't work or feel right?

Using mutually interpreted practical epistemologies of two experienced classroom teachers, Beth and Martin,[2] I will delineate each teacher's uniqueness and illustrate what it means for each to know in spontaneous practice.

Knowing in Practice

Teacher knowing is theoretical and practical, personal and professional; actions are general and specific, planned and spontaneous. Teacher practice in its many forms is an embodiment of this experienced knowing. Every aspect of teaching practice from verbal reflections and statements of intent to features as general as classroom climate to specific intricacies of spontaneous adaptation is an enactment of teacher knowing. Because each teacher's practice is unique each expresses this knowing in a very personal way. Personal and professional background, experience, perceptions, values, beliefs, goals; in short, all that is that person is synthesized and signified as minded action in every posture of teacher practice. In this paper I am concerned with the spontaneous aspect of teaching; the complex phenomenon of adaptation that occurs

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2The names of the teachers and students have been changed in accordance with ethical protocol.

when a teacher responds in the moment, without conscious, rational deliberation to environmental demands. These moments, too, are intelligent acts (Ryle, 1949) imbued with personal knowing.

Spontaneity in Practice

There is an exigency and complexity to classroom life that requires teachers to act and react in the moment. Teaching as a kaleidoscope of human interactions demands that this is so. Much of what skilled teachers do in the run of a normal teaching day is immediate and unreflected; spontaneous adaptations to situational complexities. Indeed, one study (Jackson, 1965) estimates that each day teachers at work in busy classrooms engage in as many as 1000 interpersonal interchanges; and most of these exchanges do not stem from a priori deliberations. Just as we, interacting in our complex worlds outside the classroom, depend more on intuition and contextual information than on intellectually analyzed data so it is with teachers in the complex reality of the classroom. Just as we, in our everyday interpersonal encounters, do not adhere to fixed prescriptions for communication so it is in the classroom. Experienced teachers come to rely more on how something feels or seems to be going than whether it meets with certain quantifiable criteria or laboratory proven standard. As one of my colleagues said, "It's just something that I feel. I can tell when something's going right.... I don't know how to describe the feeling but you know. You have signs." (Cole, 1987). Teachers become experts at what Hunt (1982) calls "matching in the moment". They respond to classroom demands with confidence, facility, and relative accuracy because they know what is the right thing to do.

"Reading" and "flexing" (Hunt, 1976b) to situational complexities has been widely recognized as the substance of skilled teacher practice, and described

variously as: "the touchstone of the teaching craft" (Bolster, 1983, p. 3); "the heart of the teaching-learning process" (Hunt, 1976b, p. 268); "the essential ingredient of a skilled performance" (Hunt, 1983, p. 3); and "the highest expressions of what teachers know how to do" (Olson, 1984, p. 35). Teachers intuitively and in the moment know what is the right thing to do, and they express this knowing in spontaneous action. The uniqueness of each teacher's knowing imbues each adaptation with a personal quality. Each is minded in the sense that it is an overt expression of the workings of that teacher's mind (Ryle, 1949). Beth and Martin are individuals; their teaching practices reflect this. They, as individuals, have different personal construct systems (Kelly, 1955), different backgrounds and experiences, different philosophies of teaching, and different ambitions and objectives. The way in which Beth reads and flexes to her environment is representative of her underlying personal and professional way of knowing; Martin's actions are likewise traceable to roots in his personal epistemology.

Insight into the complex and personal realm of teacher knowledge is only possible through intensive exploration of teacher practice. Because teacher knowledge is held and used in synergy, in order to understand what it means for Beth and Martin to know in spontaneous action, we must look at <u>what they do</u> in concert with <u>how they know</u>. Using each teacher's personally generated metaphor as an interpretive construct I will begin with a profile presentation of each teacher's personal epistemology of teaching and then go on to depict the theory-practice dialectic at work when each routinely engages in spontaneous teaching activity.

The use of metaphor as a vehicle for communication and understanding is certainly not a new idea but it is receiving renewed attention in this area of

research on the knowledge and language of professional practice. Hunt's work with experienced practitioners (Hunt, 1987; Hunt & Gow, 1984), ongoing research at Queen's University on metaphors and teachers' professional knowledge (Munby, 1986, 1987; Russell et al., in press), and the research on teachers' images (Clandinin, 1986; Connelly & Clandinin, in press) are some examples. In my work with Beth and Martin we found metaphors to be a powerful and meaningful medium for both communication and interpretation.

Beth's Metaphor of Teaching

> My class is like a family that is united in warmth but each person in the family is an individual and has his and her own personality and needs that need to be met inside the family.

When Beth talks about her teaching she speaks of comfort and security in a supportive and happy environment, individuality and acceptance, understanding and respect, responsibility and independence, and mutual trust. These conditions are necessary for the students' personal and academic growth. Order and consistency provide necessary stability. Cooperativeness makes the family function as an interactive unit.

Beth emphasizes physical and psychological comfort as an important determinant of success and thus a condition she strives to create and maintain; one in which the students "feel secure in taking risks and expressing opinions". The qualities she values most in her teaching are those associated with the development of positive self-image. "It is important for the students to feel important and accepted as individuals and to have a feeling that they can achieve". Beth tries to set it up so that the students learn "to respect each other and to let each other make mistakes and to show compassion for people who may not be quite as bright as they are."

In order to build on their strengths and foster their uniqueness and creativity Beth feels that she must get to know the children as persons -- their personalities, their strengths, and their interests -- so that she can match her teaching with their individual needs. In order for the family to function as a cooperative unit, learning must be a "process of people working together as a group and helping each other -- working together as a family." Mutual trust is also important to the family unity. "It's like a rapport that you build up with them. I trust them and in return they don't let me down. They would care whether or not I'd be upset with them for not doing something."

Beth's image of her class as a family is disclosed in her perceptions of her role within the family unit. That Beth sees herself in the role of a parent is shown here when she is talking very generally about her goals in relation to her own schooling, "I want it to be different for them; just sort of as a parent, the way you want things to be different for your kids."; and again when she is explaining how the personal and professional sides of her practice interplay, "I could sort of tease them as a person but still get the same professional result, like being a father or mother, it's the same sort of thing."

Beth's idea of a job well done is cooperatively working toward and reaching a common goal, "working together sort of as people in a family." Her teaching metaphor is her philosophy of teaching. It clearly expresses the values, beliefs, and ambitions implicit in her practice. When things are as she wants them to be, it is a situation that feels right. A situation that feels right for Beth is one where:

> the environment is comfortable; the students are happy with their learning; they seem emotionally comfortable and secure; the atmosphere is calm and relaxed which then allows Beth to remain calm and relaxed;

the students are making progress; they gain understanding; they're not confused;

both the personal and academic needs of the students are being met;

Beth is allowed to show her personal side to the students;

students work together cooperatively toward a common goal; they show cooperation by meeting certain agreed upon standards in their behaviour and their work.

A situation is not right when it does not fit with Beth's teaching beliefs and aspirations. When this happens she knows that a change is necessary and responds with adaptive action. She might be prompted to change an approach or method when:

noise becomes disruptive;

she is required to change her preferred style of teaching -- to be more structured, strict, to raise her voice, or to react strongly to an event;

the students look confused;

students are uncooperative or disrespectful;

it is obvious that the students are experiencing some emotional discomfort;

fairness is in question;

the level of the material is too difficult or abstract.

Beth's Knowing in Spontaneous Practice

When Beth spontaneously adapts to the demands of her educational situation she is acting in the moment. In her words, "I don't think and then act; I act and then think, 'Why did I do that?'". Guided by her knowledge, experience, and personal theories about teaching her intuitive actions are for her the right thing to do. She reads a situation and immediately flexes to it. The spontaneity of her actions is necessitated by the complexity and immediacy of classroom life. Beth reads situational cues. Sometimes the cues are external.

They come from the students -- their behaviour, responses (verbal and nonverbal), progress, or attitudes reflected in their work and behaviour; or elsewhere in the environment -- interruptions, classroom noise level, the time, weather, and so on. Sometimes the cues to which Beth responds are internal. She is triggered to act (or not) by her own estimations or feelings about a situation. Upon reading the cues she immediately flexes to the presented demands, drawing on the resources of her teaching experience and practical knowledge in a process that she describes as one that "just happens after so many years of doing it".

Many events which occur in the run of Beth's teaching day trigger responses; others pass unnoticed. Not all occurrences are seen as cues and not all situations are read. That which makes one event a cue and another not and that which influences the response spontaneously made to that cue are reflections of her personal epistemology. It is possible to examine Beth's interactive teaching and trace actions to cues, but such an exercise would contribute little to our understanding of Beth's teaching. In order to understand the meaning embedded in such actions it is necessary to explore them at a deeper, more abstract level. Then we would see the act of reading and flexing as an expression of her philosophy of teaching. Whether it is a split-second choosing of just the right student for a classroom or school task or duty; or a spontaneous shift in strategy; or an adaptation to a perceived need or concern of a student, Beth reads and flexes in a personally meaningful way that reflects her teaching philosophy. A closer look at some examples of adaptive action will reveal this complexity and uniqueness.

Adapting to Individual Students

Beth has 30 students in her class and she relates to each in a special way. Each interaction is a personal adaptation.

> Knowing their personalities and abilities and their learning styles... having to know that so you can handle them in the right way. The same with the affective part as well. Each one is an individual and dealing with them as individuals and handling their affective part all differently. But still a lot of it's the same too -- with kindness and with caring. You do that with everyone, but knowing those little idiosyncracies each has.

During a presentation on drug abuse Beth chose Frank for a role-play demonstration because

> he needs some sort of self-esteem and he's probably the one in the class who would most likely be in that situation -- the kind of kid he is and the people he's involved with and where he lives, and things like that.

David and three others were chosen to do some board work because

> they don't really shine in other areas -- to give them their moment to shine. Those kids are not necessarily top math students but it's one of their better subjects so when I see them waving their hands then I know it's a good time to pick them.

When Beth talks with Terry she uses very simple language and explains things in detail because Terry "has a lot of difficulties and you have to explain things explicitly." Rachel is "a bright girl [who] doesn't need to be handled that way" so the language Beth uses with her is quite sophisticated and abstract. Naomi is bright too but she has difficulty articulating her thoughts so Beth speaks with her in an entirely different way.

> Naomi has a lot of trouble explaining herself. I knew what she was talking about but I'd say, "I don't understand." She'd get annoyed with me, having fun but getting annoyed. So just to make her explain in more detail exactly what she had done step by step. Naomi's very quiet all the time so teasing is sort of a way to get things out of her. And with Frank it's a different thing too. To get things out of Frank you have to joke it out too. If you come on stern then he'll just turn off. He won't want anything to do with it. That's the type of kid he is.

In a math lesson when Stan indicated reluctance to do a question on the board Beth, supported by verbal comments from the other students, encouraged him to try the question. When, in spite of this encouragement and reasoning, Stan remained reluctant Beth chose a partner for him, and Stan and his partner went to the board together. Beth explains the interaction in this way:

> When Stan didn't want to go.... He had a lot of trouble yesterday but he kept it to himself until near the end of the lesson. They had already been working about 20 minutes when I found out he was having trouble. He was working away and then he came up and he didn't know what to do. He had them all wrong. So I wanted him to come up. Then when he wouldn't I guess I wanted to show him -- as a group the kids were urging him too -- that we were going to support him whether he has trouble or not. Then when he still didn't want to, to get Tammy to help him so that at least he would get up with someone else who was going to help him... more or less to show him that when he has difficulty there is someone who is going to help him. He doesn't have to do it on his own. We'll build up some kind of support.

Beth relates to Stan with understanding, patience, and consideration. She knows that he has difficulty with math and wants to convey to him that he is in an environment that will help him to overcome, rather than add to, his difficulty. She tries to show him the value in cooperation and to help him understand that he will learn by doing. With Stan, Beth's emphasis is on support and encouragement because she feels that these areas need attention if he is to overcome his problem with the math.

In another episode with Stan in another math lesson when Beth asked him to give an answer to one of the questions she had assigned for homework Stan hesitated, indicated confusion over the answer, and then told Beth that he did the question in a different way so his answer was incorrect. Beth suggested that they go over the question together and proceeded to help him to articulate the steps he took in solving the problem. Then, after figuring out how he arrived at his answer, she helped him rework the question and they arrived at a

correct solution. Once again it is apparent that Beth was mindful of Stan's math ability, his difficulty with expressing himself, and his apprehension about disclosing his weaknesses. Her belief about dealing with the personal side of the student in order for the academic to prosper is illustrated in her interactions with Stan.

Adapting to a Group

It is important that the students have every opportunity to succeed in their work. Usually through group involvement they are able to work together, build on answers, and arrive at a conclusion or understanding. At least that is how Beth likes her classes to proceed. When there's evidence of learning taking place -- "When you get results, when they're happy with their learning and they're making progress it seems to just sort of float along." Sometimes, though, Beth discerns from the students that one or more of them is having difficulty with the work. This means that they are no longer comfortable with their learning or that they are not likely to experience success. When this happens Beth flexes to the demand so that the students are once again happy and likely to be successful as she wants them to be.

On one occasion, in a lesson on the 24 hour clock, while doing some oral work with the class, Beth suddenly changed her approach remarking that some of the students might be having difficulty doing the problems in their heads, and went to the board to resume the lesson. I learned that she had responded to puzzled looks and the "select few" students raising their hands to the questions. Her knowledge of learning style differences, ability levels of the students, and her interest in having everyone understand the concept in order to succeed at the exercise came into play in her adaptation to a more concrete approach. After several examples and the puzzled looks changed to looks of

understanding, she stopped doing board work and let the students proceed on their own. Once they are comfortable with the work and likely to succeed it is best to let them continue independently to further explore the new ideas. Later on in the lesson Beth once again made an adaptation to the students' puzzled looks. Realizing, after having assigned four questions for seatwork, that several students were again experiencing difficulty, Beth reconsidered the assignment suggesting they complete only the first three questions leaving number four until after lunch. Beth comments:

> Since seeing those puzzled looks I decided to wait and see how well they did on the first three and see if they were on the right track and then look at those. I thought, "I'll hold off before I confuse them even more. For any of the ones who are confused I'd get by that first part and see how they do."... I knew that lunch was coming up and to get into it right then.... It's not something that can be gone over in a couple minutes. We'll probably take 10 minutes after lunch to go over that and do a couple of examples before they set off on their own.

A final example in which Beth comments on a reading lesson illustrates her metaphor in action.

> When I'm going through as someone's reading I'm reading ahead of them, scanning. A lot of times I choose [readers] based on their ability of what they can read. If there's a section where I see a lot of difficult words in it I'll choose a better reader than someone like Joe who had that passage at the end.... Some read a little longer than others because it's very frustrating and some of them get embarrassed. They just wouldn't want to read if I gave them the hardest passage.... I don't want to embarrass them. I want them to have the feeling that they can achieve. It's no sense putting them on the spot.... I'll build on an answer. It's more positive I think instead of always saying, "No, you have to tell me more." I'll just keep asking around the room and keep building up on the answer. I find they get more oral involvement if they are comfortable saying what they think. And then if there's still a little bit more of an interpretation then I'll add to it. Things like with Stan at the end, that is just sort of knowing him. A lot of times when he wants to say something he can't express it and his body language starts. From what he started to say I knew what he wanted to say so I more or less tried to help him sort it out and then he goes on with it.
>
> You feel good about it [building to arrive at an answer]. It ties into my metaphor about working together like a family, sort

> of "We've done it again. Everyone's added a little bit and now we have the answer.... People are adding and people are helping and finally we come to something together". It's not expressed verbally or anything but hopefully after doing that so many times they will internalize it, the process of people working together as a group and helping each other.

Beth reads her environment through the construct of her personal metaphor of teaching. She sees her classroom as a cooperative family unit -- warm, united, cooperative, supportive, accepting, and secure. When things are as she wants them to be -- when her philosophy is being enacted in her practice -- it is a situation that feels right. When something happens to disrupt, interfere with, or in some way distort her image-in-action the situation requires modification and she adapts to restore the sense of harmony to family life in her classroom.

Martin's Metaphor of Teaching

> I am a waiter in a comfortable restaurant. Prior to opening for the day I make arrangements which contribute to the general ambience. Perhaps my duties go beyond that of a waiter. Perhaps I am the maitre d'. My students are the patrons and I am there to serve them, to make their visit a pleasant and worthwhile experience. I go from table to table to ensure that they are comfortable. I make suggestions from the menu and give assistance where it is needed. The atmosphere is quiet but happy. Sounds of subdued conversation are interspersed with occasional laughter and sounds of dishes and silver. I am kept busy but I enjoy my work because I am being of service to others.

Martin sees teaching as a service profession and his role as one of providing service to the students. It is his responsibility to create and sustain a comfortable and enjoyable learning environment, to give sound and helpful advice, to provide a variety of learning opportunities from which the students can sample and choose, and to ensure that they feel satisfied and fulfilled in their accomplishments.

Martin's idea of a healthy learning environment is one that is both comfortable and stimulating, where students feel loved and understood, and know

that as they approach learning they have the support of their teacher and classmates. "It is important that the students feel good about themselves and that as they learn they gain confidence in their ability and in themselves as people." Praise and encouragement are elemental components of his teaching because the students' self-concept is a vital concern. He especially likes it when they support and encourage each other because it adds to the collegiality and good will in the classroom. He values the students' respect and reciprocates with a high regard for them. He wants the students to trust him, share with him, and seek his advice. It is also important for them to value their own knowledge and abilities. For Martin, school is a place where the students gather to sort out and categorize their ideas. When they are made to feel that they have the necessary tools and just need help in learning to use them they feel good about themselves and their learning.

Martin wants the students to enjoy their work and their own performance. He believes that learning should be fun. He likes to be able to provide an interesting variety of reading material, to use games as a learning tool, and to joke with and enjoy the students as they work and learn. He believes that the most facilitative way to promote learning is to encourage the students to follow their natural curiosities. The curriculum should be used to achieve this end. Because children have different interests and ability levels, the curriculum must cater to these differences. Variety is important, as are pace and interest level of material and activities. "Children are curious about the world around them and are eager to find out as much factual detail as they can.... The teacher should give careful attention to the students so as to ensure that the material is stimulating enough to hold their interest but easy enough so as not to discourage further progress."

Intellectual stimulation is important because the students have inherent curiosities and ideas they should be encouraged to experiment with and explore, but the material must be presented at a pace and level that is comfortable so as to minimize stress or chance of embarrassment. Martin recognizes that student learning styles differ, and that he must consider these differences so that frustration is not allowed to triumph over challenge. He likes to present material in a variety of ways to increase the chances of success for all students. When I asked Martin to comment on his use of different approaches in his teaching, and his tendency toward one to one interactions he replied, "Every student has to hear something different, and by making a general statement to the class I'm saying too much for some and not enough for others, so I'm not really being of service to them because they come from different places."

"Material has more meaning if it comes from the students" so it is important to be sufficiently flexible to be able to take advantage of any learning opportunity that may arise. When the students express an interest in a topic or raise an issue for discussion, that cue should be heeded because that material has immediate relevance to them. According to Martin, "Learning only really takes place when the student has the question in his or her mind. When they ask the question they learn more than when information is delivered to them because they can draw their own conclusions." When this happens, and they indicate understanding, Martin is pleased because he "loves the excitement of children grasping a new idea and the enthusiasm of success."

When a situation is right for Martin service is good. Good service means that:

> the students are experiencing enjoyment in their learning; they are finding the content and nature of the learning activities interesting and stimulating; their questions are being answered;

the pace and level at which the material is presented is comfortable and appropriate for each student; they are not subject to undue stress or frustration;

the students are feeling good about themselves as people and as learners; they are experiencing success with their learning endeavours;

good will exists; the students feel loved and understood; they appear happy and fulfilled;

Martin feels that he is contributing in some way to the cognitive, psychological, social, cultural, and spiritual growth of the students.

If and when a change is necessary Martin knows and adapts, perhaps because:

the students are experiencing difficulty with the material -- challenge has become frustration;

the students are losing interest either because the material or method of presentation is not sufficiently motivating, or because the lesson is going on too long;

distractions are causing learning to be disrupted;

a student's self-concept is at risk; there exists a chance of a student feeling embarrassed or self-conscious;

he is unable to give them the time and attention he feels they need and deserve.

Martin's Knowing in Spontaneous Practice

Martin's classroom is an arena of dynamic and simultaneous action. As the students, each with specific and individual needs, are engaged in numerous and varied ways in the process of personal and academic exploration and growth Martin is busy ensuring that each is suitably and comfortably involved. He orchestrates and facilitates their learning in a personal way. Embedded in each perception of his and the students' educational situation and in each resulting teaching action is a fundamental value and belief. As Martin acts and adapts within his environment he strives to enact these beliefs. Hundreds of times each teaching day he engages in a split-second of adaptive action necessitated

by some condition in the environment, some student action or response, or by some internal sensation or estimation.

Martin sees the time he spends with individual students as valuable teaching time. It allows him to serve the needs of that student, to present material at the most appropriate level and pace, at the most appropriate time, and in a way that is most likely to result in maximum benefit for that particular student. It is his way of providing good service to all. In every interaction Martin has the same fundamental objective of providing good service; but because each student is unique so must be the interaction. To be able to satisfy the demands of every situation and repeatedly achieve his goal is both an enormous task and a remarkable feat; yet one that is accomplished countless times each teaching day. These actions occur with such frequency and spontaneity in routine classroom practice that they are seldom seen as surprising or particularly impressive. A closer look at several such instances in Martin's practice will make known the depth and significance of this kind of spontaneity in teaching action.

Adapting to Individual Students

While the rest of the class worked independently on math problems Martin pulled a chair up to Donald's desk and proceeded to spend considerable time going over some work with him. Donald's presence during math period is not a regular occurrence because daily reading and math remediation usually take him away from class at this time; however, this afternoon he was in attendance, and used the time to work on some math assigned earlier that day in remedial class.

> He has difficulty reading the problems so I didn't want him at that point to be struggling with the reading. I wanted him to be dealing with the math. I helped him read some of the problems so that he could actually solve the math problem and not deal with the language problem at that point.... I think he's developed coping strategies that probably were misleading him although he has to do that. In a couple of questions there were several

> numbers and he just took those numbers and started adding them together.... I was trying to guide him to the conclusion that he had made a mistake.... I think he kind of wants me to be impressed at the level of math he's at and I kind of was. He wants me to see that he's doing math that really counts too so I made a point of saying that I was pleased that he was up to that.

Donald has special problems and therefore special academic needs. Attention to this was apparent throughout the interaction. Of greater import, though, are his emotional needs. Martin was mindful of these as they worked together. It is important for Donald to experience success and to not perceive himself as very different from the others. The best way to achieve this was to provide as much help as possible in his less developed areas. Martin read the problems to him, and that increased his chances of success with the math. Martin's knowledge and understanding of Donald's psychological needs is evident. He perceived Donald's coping strategies as necessary and considered his need for them as he tried to lead Donald to the conclusion that he had made a mistake. He wanted him to draw his own conclusion in this regard because this was a sensitive issue and Martin did not want to damage Donald's self-esteem. Self-concept was the central concern in this interaction. Martin made a point of acknowledging Donald's accomplishments because he knew that it was important to him. It would make Donald feel good about himself and his learning.

When Tina was having difficulty with one of the assigned problems Martin went to her desk to help her work it through. When she still did not catch on after he re-read the question he went back to the beginning and took her through it one step at a time. Then, he left her for a short period returning to check on her progress.

> I have a difficult time reading Tina. She seems not to understand. I find often that she understands more than she gives me a signal. If she gives no response then I assume that she is hesitant for a reason so I keep going back a step until she gives me a sign of recognition. I think sometimes I go too many steps back but that's a fair risk. Specifically with Tina I

> like going back another step until she lights up and says, "Oh, I see!" I want to build her confidence. She doesn't give a sign easily although when she finally does it's usually quite clear. She'll brighten up and she'll pick up her pencil and she'll do it.... That's what I had been looking for.... She picked up her pencil and put down the dot and then I knew that she had heard enough. She's one who needs a lot of input. She wants all the pieces.... Then it'll click.

In this instance Martin is faced with the familiar problem of trying to determine Tina's level of understanding. He wants to build her self-confidence with a successful learning experience; yet, he knows that he has difficulty reading Tina. He is so committed to his objective that he perhaps spends considerably more time than is necessary with her; but it is worth the risk to him. He knows Tina sufficiently well to use as a guide her nonverbal and sometimes verbal responses. He is not willing to leave her desk until he receives a definite indication that assures him of her understanding and ultimately of her potential success and resultant positive feelings of self-worth.

Another time when Tina had difficulty with a math problem Martin's concern for her feelings of self-worth again took precedent. When Tina attempted to answer a question after Martin had introduced the concept of ratio, Martin realized that she had not grasped the material. He understood her difficulty because he realized that he had inadvertently forgotten to arrange for Tina to return to remedial math class. He guided her through the problem until she was able to provide a correct solution.

> She seemed to not have a clue at all... basically I just wanted her to get the answer.... I could have explained to her that you divide this one by four and you multiply but mostly I was just prompting her trying to get her to have the right answer.... Most helpful to her at that point would be to have a correct answer. She had been taking her math remedially but then the previous section on graphing I had her in the room.... She should have gone back to remedial today. Still it was important to me that she get the answer one way or another.... She gave the correct

> answer so I knew that she would feel good that she had the right answer and that's important to her, to be able to get the answer.

He referred to the episode again in another discussion.

> I didn't really expect her to understand it. I was just eager to get through causing her the least pain, the least loss of face. I was hoping she might understand a little bit but I'd be satisfied if we could get through it without her losing face. I didn't believe it was essential that she understood. There were more important goals.

Martin went to George's desk to check on his progress in math because

> he puts himself down a lot and I find that I often have to look at what he's doing because often it's correct and you just have to tell him it's correct. He wants to hear that. Sometimes he's doing something wrong and I have to point it out to him but often he's doing it right and he just has to have that assurance. Then he works a lot better.

These interactions represent but four of the countless instances of adaptive action in which Martin is engaged each teaching day. Each time Martin either initiates interaction or responds to a cue his action is right only for that particular situation, at that time, and under those circumstances. In the next instant, in a different situation his actions or responses will change because the demands will be new and different. This is the case each time Martin is engaged in a one to one exchange with any one of the 21 students in his class.

Adapting to a Group

Martin's belief in the importance of attending to the students' interest in and readiness for learning is evident in these two examples. When a small group of students, with whom Martin had been working, expressed a desire to continue working through recess Martin consented to give up his morning recess to continue working with them. He was pleased with the interest shown.

> They were asking questions today that I wish they had been asking all along, but today they wanted to know.... They were asking, and because they were asking I had a feeling that they were going to learn.... I thought, "This is prime teaching time. This time

> they are going to learn because they want to know it." They kind of want to know it all the time but no sense answering a question they don't seem to have. When they were asking it, it seemed to be prime teaching time.

During a science lesson on ocean life Martin turned the lesson away from a review of notes he had just written on the board to give the students time to share anecdotes. This change was in response to one student's offer to bring a piece of sea sponge to class. The opportunity to recognize their interests and curiosities was welcomed because it gave the students a chance to "integrate [the lesson content] into their lives". Martin "was pleased because it means that there's another little bit of her life that will fit with this thing we're talking about" and because "conversation is a way of finding the right category so that loose bits of information can stick."

Martin is repeatedly faced with the dilemma of being able to provide good service to all. He feels responsible when lessons don't go well; when the students experience difficulty, seem to lose interest, or appear frustrated. Even though he admits that, "Sometimes to offer excellent service to one means you limit the service to someone else" he still works to restore consonance through adaptive action. In a language lesson when it became evident that the students were experiencing unanticipated difficulty Martin was faced with the dilemma of continuing the lesson in spite of the students' obvious waning interest and frustration, or ending the lesson with the risk of leaving the students with a feeling of defeat or confusion. Martin's value of their self-concept emerged victorious and he continued with the lesson making ongoing modifications to his approach. Martin explained the strategy shift in this way:

> I was trying to hurry things along and I thought that if they understood they would be able to answer the question, "What is the predicate adjective?". The fact that Johnathan took a little while led me to believe that I had better back up.... I had misguaged how easy it was. I thought they would be able to just answer and when I tried that with several students and several

> failed I went back to the three questions.... I wasn't so surprised that Peter couldn't figure it out but when I tried it again over here and they couldn't then I stuck with asking those questions.... I wanted at that point to give them some work to do at their seats but I didn't feel they were clear enough on what I was trying to teach.... Although I was pushing them to attend to a whole class discussion longer than I think is comfortable for them I didn't see any alternative so I asked them to stick with me on it.

Martin's concerns about ambience, comfort, service, and customer satisfaction define his knowing and describe what it means for a situation to be right for him. When his beliefs are enacted service is good. When something isn't working or doesn't feel right, service is unsatisfactory and Martin works to restore consonance to the situation until his standards of excellent service are once again realized.

Beth's and Martin's metaphorical articulations represent their personal images of practice, as it is and as each wants it to be. When they are engaged in their respective educational situations each teacher acts in ways which will allow personal beliefs to be expressed. Their knowing is reflected in the environmental conditions, interactions, and results they strive to create. When the situation is as Beth and Martin want it to be there is a sense of harmony to family life in Beth's classroom and an air of satisfaction and fulfillment with the service provided in Martin's.

Personal Inquiry -- Self-Renewal

Teachers who are self-renewing professionals actively pursue knowledge through inquiry into experience, through systematic reflection on ideas and actions, and through "an endless and unpredictable dialogue between [their] potentialities and the claims of life." (Gardner, 1964, p. 11), a process that Gardner suggests is never-ending for the self-renewing person.

Using a collaborative approach to classroom research these teachers have made explicit their personal understandings, and we and they have seen how these understandings are enacted in their practice. As indicated at the outset, change and/or improvement were not objectives in this study; however, Beth and Martin did report benefits of raised awareness and increased understanding. Beth found the experience to be "a most valuable learning and self-evaluative tool." Martin's comments indicate increased awareness.

> I think I have a deeper awareness of what's going on when I'm teaching now. By having isolated certain aspects of what's going on in the classroom, laid them on the table looking at them more closely, I think it's deepened my awareness of what's going on when I put it back into that integral whole.

This experience of personal inquiry was one that provided answers and at the same time raised questions. Through systematic reflective inquiry into their own teaching practices Beth and Martin have taken the necessary first steps, discovering entry points to further personal inquiry. With the considerable amount of data now at hand, they can look at and continue to sytematically reflect on any aspect of their practice for the purposes of their choice, and they can do so using their own constructs as a frame for analysis.

As Hunt (1987) suggests in his invitation for practitioners to engage in self inquiry, "Self-knowledge is the first step toward change.... But remember the decision to change is up to you." (p. 83).

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